Scientific Inquiry

1-1 The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

1-1.1 Compare, classify, and sequence objects by number, shape, texture, size, color and motion, using standard English units of measurement where appropriate.
Taxonomy Level: 2.6-B Understand Conceptual Knowledge

Previous/Future knowledge: In kindergarten, students compared objects by using nonstandard units of measurement (K-1.4) and classify objects by observable properties (including size, color, shape, magnetic attraction, heaviness, texture, and the ability to float in water) (K-5.1). In 2nd grade (2-1.2), students will begin using metric units of measurement when they use tools. In 3rd grade, students will classify objects by two of their properties (3-1.1) and classify objects or events in sequential order (3-1.2). In 6th grade (6-1.3), students will use a dichotomous key to classify organisms and objects.

It is essential for students to know that objects have observable properties such as number, shape, texture, size, color, and motion (direction and speed). These properties can be used to compare, classify, and sequence objects.

- Objects can be compared by observing using the five senses.
- Objects can be classified according to observed similarities or differences.
- Objects can be sequenced, or put into an order, by an attribute such as size or number.

Standard English units should be used where appropriate when making measurements of objects. For example, rulers should measure to the nearest whole inch; time can be measured in hours to the nearest half hour.

It is not essential for students to classify observations as qualitative or quantitative or use metric units of measurement. Smaller units of distance (smaller than an inch) and time (seconds) are not essential. Temperature measurements are not essential for science but may be appropriate for math academic standards.

Assessment Guidelines:
One objective of this indicator is to *compare* objects by number, shape, texture, size, color, and motion, using standard English units of measurement where appropriate; therefore, the primary focus of assessment should be to detect similarities and differences between objects using the properties in the indicator. However, appropriate assessments should also require students *recognize* the property used to compare objects.

Another objective of this indicator is to *classify* objects by number, shape, texture, size, color, and motion, using standard English units of measurement where appropriate; therefore, the primary focus of assessment should be to group objects using the properties in the indicator. However, appropriate assessments should also require students *recognize* the property used to group objects.

Another objective of this indicator is to *sequence* objects by number, shape, texture, size, color, and motion, using standard English units of measurement where appropriate; therefore, the primary focus of assessment should be to place objects in an orderly arrangement using the properties listed in the indicator. However, appropriate assessments should also require students *recognize* the property used to place objects in an orderly arrangement.